

Abstract Submitted
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Studying Mechanical Resonance with a Michelson Interferometer¹ ARDEN LESLEY, MICHAEL DOUCETTE, SETH SMITH, Francis Marion University — A Michelson Interferometer was used to study mechanical resonance in a magnetically-driven harmonic oscillator. One of the arms of the Michelson Interferometer was comprised of a mirror that was attached to the harmonic oscillator. As the oscillator vibrated, this caused changes in the interference by altering the path length difference between the interferometer's arms. When the oscillator reached a resonant frequency, this caused large increases in the amplitude of the vibration. The dependence of the resonant frequency of the mass of the harmonic oscillator was measured and the results were compared to predictions from theory.

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